



MAY 24 1979

Department of Energy  
Washington, D.C. 20585

REFERENCE

STAT

[Redacted]  
Office of Logistics  
Plans and Programs Staff  
Central Intelligence Agency  
Washington, D.C. 20505

STAT

Dear [Redacted]

Attached are copies of Form EIA-77, Preliminary Energy Audit Report, as it exists prior to approval by the General Services Administration (GSA). We do not expect any significant changes in the final version. When cleared by GSA, EIA-77 will be formally submitted to your agency for completion by July 1, 1979. Although EIA-77 is still technically in draft form, we hope that by making it available to you earlier, we can facilitate your data collection efforts.

If I can be of any assistance in this matter, please do not hesitate to contact me at (202)376-4017. Thank you for your cooperation.

Sincerely,

A handwritten signature in cursive script that reads "Jean J. Boulin".

Jean J. Boulin, Project Manager  
Federal Energy Management Program

Attachment

*P.S. Also attached - Federal Photovoltaics NP12*

its weight. Alternatively, a water flow meter may be used to measure the volume of water withdrawn from the water heater directly. Continuously monitor the outlet water temperature from the start of the waterdraw and record the maximum value measured. For the purposes of this test, this recorded temperature shall be referred to as the initial outlet water temperature. Continue the withdrawal of water until the outlet water temperature drops to a value 40° F below the initial outlet water temperature, at which time terminate the withdrawal, record the time duration,  $t_f$ , of the test, in hours measured with an error no greater than 2 percent, and record the weight of the water withdrawn,  $W$ , in pounds, measured with an error no greater than 2 percent, or the volume of the water withdrawn,  $G$ , in gallons, measured with an error no greater than 2 percent. If the outlet water temperature does not drop 40° F after one hour, the test is to be terminated and the first hour rating expressed as greater than 300 gallons.

**3.7.2 First hour rating test for electric water heaters with immersed heating elements.** Except as provided in this section, all electric water heaters with an immersed heating element shall be tested with an immersed heating element that has a design power rating of 4.5 kilowatts. If 4.5 kilowatts exceeds the maximum design power rating specified by the manufacturer for the water heater to be tested, the first hour rating test shall be conducted with the water heater equipped with an immersed heating element of a design power rating equal to the manufacturer's specified maximum design power rating. All water heaters designed to operate with dual immersed heating elements shall be tested with dual immersed heating elements of equal design power rating in accordance with the provisions specified in this section. Tests shall be conducted in accordance with the same procedures as those specified in section 3.7.1.

2. Appendix E to Subpart B of Part 430 is amended by adding a new section 4.7 to read as follows:

#### 4.7 Recovery rate.

**4.7.1 Recovery rate for gas and oil water heaters.** For a gas or oil water heater, calculate the recovery rate,  $R$ , expressed in gallons per hour and defined as:

$$R = \frac{P \times E_r}{k \times \Delta T_i}$$

Where:

$k$  is as defined in section 4.1.1.

$\Delta T_i$  is as defined in section 4.3

$E_r$  is as calculated in section 4.1.1.

$P$  = power input to the burner, determined in accordance with section 3.2.1, expressed in Btu per hour.

**4.7.2 Recovery rate for electric water heaters.** For an electric water heater, calculate the recovery rate,  $R$ , expressed in gallons per hour defined as:

$$R = \frac{P \times E_r \times 3.412 \text{ Btu/kWh}}{k \times \Delta T_i}$$

Where:

$k$  is as defined in section 4.1.1.

$\Delta T_i$  is as defined in section 4.3.

$E_r$  is as calculated in section 4.1.2 for electric water heaters with other than immersed heating elements, or section 4.1.3 for electric water heaters with immersed heating elements.

$P^*$  =  $P$  (power input to the heating elements, expressed in kilowatts, as determined in accordance with section 3.2.1 for electric water heaters with other than immersed heating elements or section 3.2.2 for electric water heaters with immersed heating elements) with the following exception: For electric water heaters with dual immersed heating elements which, in characteristic operation of the water heater, are not energized simultaneously at any time,  $P^*$  shall be taken as the design power rating of the heating element in closest proximity to the hot water outlet of the water heater, expressed in kilowatts.

#### Appendix E to Subpart B [Amended]

3. Appendix E to Subpart B of Part 430 is amended by adding a new section 4.8 to read as follows:

**4.8 First hour rating.** Calculate the first hour rating,  $F$ , expressed in gallons and defined as:

$$F = \frac{W}{d} + [R \times (1 - t_f)], \text{ or}$$

$$F = G + [R \times (1 - t_f)]$$

Where—

$R$  is as calculated in section 4.7.1 for gas and oil water heaters, or section 4.7.2 for electric water heaters.

$W$  = weight of the water withdrawn from the water heater during the first hour rating test, determined in accordance with section 3.7.1 for gas and oil water heaters and electric water heaters with other than immersed heating elements, or section 3.7.2 for electric water heaters with immersed heating elements, expressed in pounds.

$d$  = 8.25 pounds per gallon, the nominal density of water.

$G$  = volume of water withdrawn from the water heater during the first hour rating test, determined in accordance with section 3.7.1 for gas and oil water heaters and electric water heaters with other

than immersed heating elements, or section 3.7.2 for electric water heaters with immersed heating elements, expressed in gallons.

$t_f$  = duration of the water draw in the first hour rating test, determined in accordance with section 3.7.1 for gas and oil water heaters and electric water heaters with other than immersed heating elements, or section 3.7.2 for electric water heaters with immersed heating elements, expressed in hours.

(Docket No. CAS-RM-79-105)

(FR Doc. 79-14489 Filed 5-4-79; 4:30 pm)

BILLING CODE 6450-01-M

#### [10 CFR Part 436]

#### Federal Photovoltaic Utilization Program; Public Hearing

**AGENCY:** Department of Energy.

**ACTION:** Proposed rule.

**SUMMARY:** The Department of Energy today proposes rules for the monitoring and assessment requirements of the Federal Photovoltaic Utilization Act, Title V, Part 4 of the National Energy Conservation Policy Act. The program implementing this legislation is referred to as the Federal Photovoltaic Utilization Program, and is summarized in the following preamble. Under this program, Federal agencies will receive funds from the Department of Energy for the installation of photovoltaic solar electric systems at Federal facilities. Today's proposed rules relate only to requirements for monitoring and assessing the performance and operation of systems installed as a part of the program.

**DATES:** Written comments must be submitted by July 9, 1979. Public hearings will be held on June 14, 1979, beginning at 9:30 a.m. Requests to testify at the hearing must be submitted by June 4, 1979.

**ADDRESSES:** Send written comments and requests to speak to Margaret W. Sibley, Office of Conservation and Solar Applications, Room 2221C, 20 Massachusetts Avenue, N.W., Washington, D.C. 20545. Hearing will be held at Room 3000A, 12th and Pennsylvania Avenue, Washington, D.C. Documents for public inspection or copying may be found at the DOE Reading Room, GA-152, Forrestal Building, 1000 Independence Avenue, S.W., Washington, D.C. 20585.

**FOR FURTHER INFORMATION CONTACT:**

Elaine Smith, Federal Photovoltaic Utilization Program Manager, Office of Conservation and Solar Applications, Department of Energy, Room 1210, 20 Massachusetts Avenue, N.W., Washington, D.C. 20545 (202) 376-5931.

Margaret W. Sibley, Office of Conservation and Solar Applications, Department of Energy, Room 2221C, 20 Massachusetts Avenue, N.W., Washington, D.C. 20545 (202) 376-1651.

William J. Dennison, Office of General Counsel, Department of Energy, Room 3228, 20 Massachusetts Ave., N.W., Washington, D.C. (202) 376-4100.

**SUPPLEMENTARY INFORMATION:****I. Introduction and Background****II. Statutory Provisions****III. Description of the Federal Photovoltaic Utilization Program**

**A. The Accelerated Growth of a Commercially Viable and Competitive Industry to Make Photovoltaic Solar Electric Systems Available to the General Public as an Option**

**B. The Reduction of Fossil Fuel Costs to the Federal Government**

**C. The Stimulation of the General Use Within the Federal Government of Methods for the Minimization of Life Cycle Costs**

**D. The Development of Data on Performance and Operation Through Monitoring and Assessment of Photovoltaic Solar Electric Equipment for Which Assistance was Provided**

**E. The Installation of the Most Advanced and Reliable Photovoltaic Solar Electric Technologies**

**IV. Issues****§ 436.92 Monitoring Requirements****a. Installation Data****b. Operational Data****§ 436.93 Assessment Requirements****a. Agency Assessment****b. DOE Assessment****§ 436.94 Additional Data Options****V. Environmental Review****VI. Comment Period and Hearing Procedures****VII. Determinations Under Executive Order 12044****I. Introduction and Background**

Title V, Part 4 of the National Energy Conservation Policy Act (NECPA) (Pub.L. 95-619) establishes the Federal Photovoltaic Utilization Program (FPUP) to be administered by the Department of Energy (DOE). The Act authorizes the appropriation of \$98,000,000 through the fiscal year ending September 30, 1981, and calls for the installation of photovoltaic solar electric systems in Federal facilities. Photovoltaic solar electric systems directly convert sunlight into electricity. Congress intends this program to stimulate the use of low-cost production techniques by the domestic photovoltaic industry.

The FPUP is part of continuing Federal support for the development of

solar energy in general, and photovoltaics in particular. Some of the technologies that will be used as a part of FPUP have been developed under the Solar Energy Research, Development and Demonstration Act of 1974 (Pub.L. 93-473). The DOE expects FPUP to assist in accelerating the commercialization of photovoltaic technology. As an ancillary benefit, the DOE anticipates that experience in using this technology will provide important feedback for continuing research and development efforts directed toward improved products.

The FPUP also continued the work started by Section 208 of the Department of Energy Act of 1978 (Pub.L. 95-238) which established a program to purchase photovoltaic solar electric systems for use by Federal agencies in life cycle cost effective applications. The Section 208 program is described in the Department of Energy Final Report, "Application and System Design Study for Cost-Effective Solar Photovoltaic Systems at Federal Installations", February 1979.

The DOE intends to implement the FPUP in rounds as funds are appropriated by Congress. Within each round there will be 2 phases: Phase I provides for selection of projects and their installation. Phase II involves monitoring and assessing the performance and operation of the photovoltaic solar electric systems funded through the FPUP for a period of three years. Applications may be submitted to the DOE by any Federal agency desiring to install photovoltaic solar electric equipment at a Federal facility. The application for project assistance shall include information concerning: the funds required for the acquisition and installation of photovoltaic solar electric equipment on the specified facility; the proposed implementation schedule; the extent to which the public, private, or commercial sector utilizes facilities of the type for which project assistance is applied; the extent to which the agency intends to participate in a permanent Federal market for photovoltaics; and a determination of the life cycle cost effectiveness.

Applications for fiscal year 1979 have been based on the life cycle costing methodology developed for use in the Section 208 program and contained in "Application and System Design Study for Cost-Effective Solar Photovoltaic Systems at Federal Installations," Final Report, February 1979. Currently the DOE is coordinating the formulation of more sophisticated life cycle costing methodologies.

The proposed rules set forth at the end of this preamble cover only one aspect of the FPUP: the specific requirements for monitoring and assessing the performance and operation of the FPUP solar electric systems. This preamble summarizes the entire program, including the monitoring and assessment requirements, and also discusses alternatives to the proposed rules.

**II. Statutory Provisions**

Section 563 of the NECPA establishes the Federal Photovoltaic Utilization Program (FPUP) which requires the DOE to develop and carry out a program to stimulate photovoltaic energy commercialization through accelerated procurement and installation of photovoltaic solar electric systems in Federal facilities. To this end, section 565 authorizes the DOE to make acquisitions of photovoltaic solar electric systems. Acquisitions may occur through the use of multiyear contracts. Section 566(1) requires the DOE to consult with the Department of Defense to insure that the installation and purchase of FPUP photovoltaic solar electric systems does not interfere with defense-related activities. Section 566(2) requires the DOE to prescribe rules and regulations to monitor and assess the performance and operation of photovoltaic electric systems installed pursuant to the FPUP. Section 566(3) requires the DOE to report annually to the Congress on the status of the program. Section 567(a) limits the DOE to procuring not more than 30 megawatts of photovoltaic solar electric systems through fiscal year ending September 30, 1981, for purposes of the FPUP.

Section 567(b) provides that Federal agencies may directly procure photovoltaic solar electric systems, in lieu of purchases of photovoltaic solar electric systems under FPUP. However, such agencies are required by section 567(b) to consult with the DOE before procuring such systems. Section 569 authorizes the appropriation of funds to the DOE for the purpose of this program not to exceed \$98,000,000 through the fiscal year ending September 30, 1981.

**III. Description of the Federal Photovoltaic Utilization Program**

The program policies discussed in this section are intended to provide for the accomplishment of the program purposes within the framework of the legislation. In this section, a purpose of the FPUP is set forth, and then the program policies are discussed in order

to illustrate the way in which that purpose will be accomplished.

**A. The Accelerated Growth of a Commercially Viable and Competitive Industry To Make Photovoltaic Solar Electric Systems Available to the General Public as an Option**

A purpose of the legislation is to accelerate the growth of a commercially viable and competitive industry in order to make photovoltaic solar electric systems available to the general public as an option. The DOE plans to schedule procurement of photovoltaic solar electric systems in a manner which will stimulate the use of low-cost production techniques by suppliers of such systems. By participating with the other Federal agencies in the selection of photovoltaic electric system applications and suppliers, the DOE intends to create a Federal market for photovoltaic solar electric systems. The increased annual sales to this Federal market are expected to stimulate the use of low-cost mass production processes by the photovoltaic solar electric industry.

**B. The Reduction of Fossil Fuel Costs to the Federal Government**

Another purpose of the legislation is to reduce fossil fuel costs to the Federal Government. The DOE intends to fund photovoltaic solar electric systems under the FPUP only if their installation would result in the reduction of current use of fossil fuels or reduction in the rate of growth of fossil fuel use.

**C. The Stimulation of the General Use Within the Federal Government of Methods for the Minimization of Life Cycle Costs**

The DOE intends to establish guidelines to stimulate the general use within the Federal Government of methods for the minimization of life cycle costs. The DOE will require each participating agency to submit and explain information regarding all of the costs to be incurred and all of the savings to be accrued over the total lifetime of the photovoltaic system. Because the savings are assumed to be in the form of reduced conventional energy demand, the savings can be quantified by the value of the amount of fuel saved due to the use of photovoltaic solar energy equipment to meet some of the energy demand of the facility.

Applications for FY 1979 have been based on the life cycle costing methodology developed for use in the Section 208 program and contained in "Application and System Design Study for Cost-Effective Solar Photovoltaic Systems at Federal Installations." Final

Report, February 1979. Currently the DOE is coordinating the formulation of more sophisticated life cycle costing methodologies. Such methodologies will be utilized by the DOE and participating agencies to determine the life cycle cost effectiveness of future installation under the FPUP. The new methodologies will be available from the DOE and comments on their validity will be welcome.

**D. The Development of Data on Performance and Operation Through Monitoring and Assessment of Photovoltaic Solar Electric Equipment for Which Assistance Was Provided**

Section 566(2) of the FPUP legislation requires that the DOE establish rules to monitor and assess the photovoltaic solar electric equipment for which assistance was provided under the FPUP. The rules proposed today define and outline the specific information required to be reported and the reporting schedule. The information collected from the installations will provide one substitute for private and commercial experience in the use of photovoltaics.

The DOE recognizes the problems of Federal agencies in meeting reporting requirements. Therefore, to the extent possible, the DOE will minimize the burden of the data gathering activities to be required by this program. In a few selected sites, DOE may feel that a project design warrants additional specific data gathering. The DOE and the participating agency will make any necessary contractual arrangements when a site is selected for additional data gathering. A discussion of the proposed monitoring and assessment rules is presented in Section IV below.

**E. The Installation of the Most Advanced and Reliable Photovoltaic Solar Electric Technologies**

One objective of the legislation is installation, to the maximum extent practicable, of the most advanced and reliable technologies. In order to assure, monitor, and maintain control over the completeness and reasonableness of the system design, and to insure that such systems reflect the most advanced and reliable technologies, the DOE will provide assistance in a two-step process—proposals will be reviewed and initial selections made, after which the system design will be reviewed. If the system design is technically adequate, assistance will be provided through interagency agreement. If the system design is technically inadequate, then the DOE will attempt to assist the applicant make its proposal design

acceptable. The DOE will not provide assistance in connection with cost overruns. The DOE will not provide any assistance in connection with operation and maintenance of the photovoltaic solar electric system, or the management and operation of the facility.

**IV. Issues**

In the process of formulating the proposed rules, the DOE considered alternatives to the rules as proposed. This section discusses those alternatives and explains why the option that appears in the proposed rules was chosen. The numbering below corresponds to the numbering in the proposed rules to make cross-referencing easier.

**§ 436.92 Monitoring requirements.**

(a) *Installation Data.* The proposed rules require the participating agency to keep background data on file for each installation. The information required includes the system design and installation drawings, acceptance test plan and data, records of design reviews, and an operation and maintenance manual. The DOE considered requiring the submission of all this data to the DOE as part of the Installation Report. Installation Reports are required to be submitted within 60 days of project completion. The DOE chose, however, not to require the submission of the background information in order to minimize the reporting burdens on the participating agencies.

The Installation Report may be submitted for a group of systems (systems group) having substantially similar systems characteristics, as defined in the definitions section of the proposed rules. The DOE elected this approach instead of an absolute requirement of submitting an Installation Report for each installation. Such systems groups are to be identified in cooperation between the participating agency and the DOE. The systems group reporting approach was chosen in order to minimize agency reporting requirements. It is further anticipated that information classified by systems group will be of greater value to future Federal initiatives and private sector programs.

(b) *Operational Data.* The proposed rule requires the participating agency to submit semiannual Operational Reports for a period of three years. A question considered by the DOE was the length of time an agency would be required to submit the Operational Reports. The DOE feels that uniform operational data

is required in order to integrate the FUP data with future programs. As a result, the DOE elected to propose a requirement that the agencies submit operational data for a period of three years on all installations and/or systems groups.

#### § 436.93 Assessment requirements.

(a) *Agency Assessment.* The DOE is proposing to require each participating agency to submit a summary of its experience with the FUP solar systems, in order to learn more about attitudes that result from user experience with photovoltaics. User attitudes are important to the photovoltaic industry and to Congress in their attempts to stimulate a photovoltaics market.

(b) *DOE Assessment.* The DOE is proposing to assess the performance and operation of systems along with the participating agencies. The DOE assessment will appear in the annual report to Congress required by Section 566(3). An alternative would be to prepare a separate report. Because the public, photovoltaics industry, and others would have access to the annual report to Congress, a separate report would result in unnecessary duplication.

#### § 436.94 Additional data options.

Many of the systems to be installed under the FUP can yield important technical information. Requiring extensive reporting on all systems, however, would be time consuming and expensive. As a result, the DOE has reserved the right to choose individual systems for intensive monitoring. For systems so chosen, the DOE will arrange for the provision of technical, financial, and personnel assistance for the participating agency. As a result, the participating agency will not be burdened with additional reporting or financial requirements.

### V. Environmental Review

DOE is preparing an environmental assessment of the Federal Photovoltaic Utilization Program pursuant to the National Environmental Policy Act of 1969, as amended (NEPA) (42 U.S.C. 4321 *et seq.*). If on the basis of this environmental assessment, it is concluded that the impacts of the program are environmentally significant, an environmental impact statement will be prepared. This NEPA review will be completed and considered prior to the promulgation of a rule in this matter.

### VI. Comment Period and Hearing Procedure

#### A. Written Comments

Interested persons are invited to submit written comments with respect to the proposed regulation to Margaret Sibley at the address specified at the beginning of this preamble. Comments should be identified on the outside of the envelope with the designation "Federal Photovoltaic Utilization Program (Docket No. CAS-RM-79-402)." Five copies must be submitted. All comments received by July 9, 1979, before 4:30 p.m., and all relevant information, will be considered by the DOE before final action is taken on the proposed regulations.

Any information or data considered by the person furnishing it to be confidential must be so identified and submitted in writing, one copy only. The DOE reserves the right to determine the confidential status of the information or data and to treat such information or data according to its determination.

#### B. Public Hearings

1. *Request Procedure.* The time and place for the hearing are indicated at the beginning of this preamble. If necessary to present all oral statements, the hearing will be continued at 9:30 a.m. on June 15, 1979.

Any person who has an interest in the proposed regulations issued today, or who is a representative of a group or class or persons with such an interest, may make a written request for an opportunity to make an oral presentation. Such a request should be delivered to the DOE at the address stated at the beginning of this preamble, and must be received before 4:30 p.m., on June 4, 1979. Such a request may be hand delivered to Room 2221C, 20 Massachusetts Avenue, N.W., Washington, D.C., between the hours of 8 a.m. and 4:30 p.m., Monday through Friday, except for holidays. The person making the request should be prepared to describe the interest concerned; to state, if appropriate, why he or she is a proper representative of a group or class of persons that has such an interest; and to give a concise summary of the proposed oral presentation and a phone number where he or she may be contacted through June 14, 1979.

Each person selected to be heard will be notified by the DOE before 4:30 p.m., on June 6, 1979, and must submit 15 copies of his or her statement to Margaret W. Sibley, Room 2221C, 20 Massachusetts Avenue, N.W., Washington, D.C. 20545 by June 11, 1979.

2. *Conduct of the Hearing.* The DOE reserves the right to select the persons to be heard at the hearing, to schedule their respective presentations and to establish the procedures governing the conduct of the hearing. The length of each presentation may be limited, based on the number of persons requesting to be heard.

A DOE official will be designated to preside at the hearing. This will not be a judicial or evidentiary-type hearing. Questions may be asked only by those conducting the hearing, and there will be no cross-examination of persons presenting statements. Any decision made by the DOE with respect to the subject matter of the hearing will be based on all information available to the DOE. At the conclusion of all initial oral statements, each person who has made an oral statement will be given the opportunity if he or she so desires, to make a rebuttal statement. The rebuttal statements will be given in the order in which the initial statements were made and will be subject to time limitations.

Any interested persons may submit questions, to be asked of any person making a statement at the hearings, to Margaret Sibley before 4:30 p.m., June 13, 1979. Any person who wishes to ask a question at the hearing may submit the question, in writing, to the presiding officer. The DOE, or the presiding officer if the question is submitted at the hearing, will determine whether the question is relevant, and whether the time limitations permit it to be presented for answer. Any further procedural rules needed for the proper conduct of the hearings will be announced by the presiding officer.

A transcript of the hearing will be made and the entire record of the hearing, including the transcript, will be retained by the DOE and made available for inspection at the Freedom of Information Office, Room GA-152, Forrestal Building, 1000 Independence Avenue, S.W., Washington, D.C., between the hours of 8 a.m., and 4:30 p.m., Monday through Friday.

In the event that it becomes necessary for the DOE to cancel a hearing, DOE will make every effort to publish advance notice in the Federal Register of such cancellation. Moreover, DOE will notify all persons scheduled to testify at the hearings. However, it is not possible for DOE to give actual notice of cancellations or changes to persons not identified to DOE as participants. Accordingly, persons desiring to attend a hearing are advised to contact DOE on the last working day preceding the date of the hearing to confirm that it will be held as scheduled.



**VII. Determinations Under Executive Order 12044**

Today's proposed rule was reviewed under Executive Order 12044, 43 FR 12861, and is deemed to be significant because of the impact on Federal agencies of the Executive Branch. This is not deemed a major rulemaking because the rules when finalized will not have the kind of effects which call for a regulatory analysis.

(National Energy Conservation Policy Act, Pub. L. 95-619; Department of Energy Organization Act, Pub. L. 95-61.)

In consideration of the foregoing, it is proposed to amend Chapter II of Title 10, Code of Federal Regulations, by establishing Subpart E or Part 436 as set forth below.

Issued in Washington, D.C., May 2, 1979.

Maxine Savitz,  
Deputy Assistant Secretary, Conservation and Solar Applications.

**PART 436—FEDERAL ENERGY MANAGEMENT AND PLANNING PROGRAMS****Subpart E—Federal Photovoltaic Utilization Program**

- Sec.  
436.90 Purpose and scope.  
436.91 Definitions.  
436.92 Monitoring requirements.  
436.93 Assessment requirements.  
436.94 Additional data reporting options.

Authority: Sec. 566(2), National Energy Conservation Policy Act, [Pub. L. 95-619, 92 Stat. 3281].

**Subpart E—Federal Photovoltaic Utilization Program****§ 436.90 Purpose and scope.**

This subpart provides the rules that the Department of Energy is required to promulgate for monitoring and assessing the performance and operation of photovoltaic systems under the Federal Photovoltaic Utilization Act, Title V, Part 4 of the National Energy Conservation Policy Act of 1978 (Pub. L. 95-619). The program implementing this legislation is known as the Federal Photovoltaic Utilization Program. The legislation authorizes the Department of Energy to fund the installation of photovoltaic solar electric systems in Federal facilities. The regulations set forth monitoring and assessment requirements applicable to the Department of Energy and the Federal agencies that install photovoltaic solar electric systems using project assistance provided under the Federal Photovoltaic Utilization Program.

**§ 436.91 Definitions.**

As used in this part:

"Acceptance Test Costs" means the costs associated with executing an acceptance test plan and collecting acceptance test data.

"Acceptance Test Data" means that data collected as a result of the execution of an acceptance test plan.

"Acceptance Test Plan" means a test procedure for assuring that a photovoltaic solar electric system will meet its designed reliability and power output requirements after installation and prior to acceptance by a Federal agency.

"Agency" means an Executive agency as defined in Section 105 of Title 5, United States Code.

"Construction Costs" means the cost of site preparation, including the cost of materials and labor related to site preparation, prior to installation of a photovoltaic solar electric system.

"Design Review" means a meeting or series of meetings held by an agency with the designer of a photovoltaic solar electric system to assess and document the adequacy and accuracy of the mechanical, electric, and control portions of the system and to insure that estimates of acquisition, construction, and installation costs are correct.

"DOE" means the Office of Conservation and Solar Applications of the Department of Energy.

"Engineering Design Costs" means the cost of preparing specifications and drawings for the procurement, construction, and installation of photovoltaic solar electric systems.

"Facility" means any structure or fixture which uses electrical energy.

"Federal Facility" means any building, structure, or fixture or part thereof which is owned by the United States or any Federal agency, or which is held by the United States or any Federal agency under a lease-acquisition agreement under which the United States or Federal agency will receive fee simple title under the terms of such agreement without further negotiation.

"Installation Costs" means the cost of installing a photovoltaic solar electric system on a prepared site, but does not include photovoltaic structure costs.

"Normal Operation" means the operation of the photovoltaic solar electric system, where after installation, the system meets designed reliability and power output requirements.

"Operations and Maintenance Costs" means those costs incurred after commencement of normal operation and associated with maintaining a photovoltaic solar electric system so that it continues to perform satisfactorily over its design lifetime.

"Operations and Maintenance Manual" means a technical document prepared by the manufacture or the installer of a photovoltaic solar electric system, describing how the system functions and specifying the procedures to be followed so that normal operation of the system is maintained.

"Photovoltaic Array" means that portion of a photovoltaic solar electric system which directly converts incident sunlight to electricity by means of photovoltaic effect.

"Photovoltaic Array Costs" means the cost of a photovoltaic array.

"Photovoltaic Effect" means the physical phenomenon exhibited under certain circumstances by some materials in which a portion of the light energy striking the material is directly converted to electrical energy.

"Photovoltaic Outage" means an interruption of normal operation due to a failure within the photovoltaic solar electric system.

"Photovoltaic Solar Electric System" means a system consisting of a photovoltaic array and all other components, including energy storage devices where appropriate, necessary to provide electricity.

"Photovoltaic Structure Costs" means the cost of the structure necessary to support the photovoltaic array, but does not include installation costs.

"Program" means the Federal Photovoltaic Utilization Program which implements the Federal Photovoltaic Utilization Act.

"Project" means specific actions to accomplish the design, acquisition, construction, and installation of photovoltaic solar electric equipment in a single facility.

"Sub-Assemblies Costs" means the cost of the components of a photovoltaic solar electric system such as batteries, regulators, inverters, and cabling.

"Systems Group" means a grouping of photovoltaic solar electric systems which have similar design and operating characteristics, which are operated by the same agency, and which have been specifically designated as a systems group by the DOE. Factors considered in designating a systems group include, but are not limited to: Design, location, method of installation, facility type, technology, operations and maintenance schedules, size, costs, and projected costs in future markets.

**§ 436.92 Monitoring requirements.**

(a) *Installation data.* (1) Each agency participating in the program shall maintain for each project records regarding the information described below. Upon reasonable notice of

request, the participating agency shall make such records available to DOE for inspection. Four copies of the information shall be submitted to the DOE upon request. The information may also be submitted to the DOE in the same form and at the same time as it is received or generated by an agency. The records required to be maintained under this paragraph include:

(i) Current photovoltaic solar electric system design and installation drawings;

(ii) A written record of the project design review;

(iii) Acceptance test plan and acceptance test data; and

(iv) The Project Operation and Maintenance Manual.

(2) Within sixty days of commencement of normal operation, each participating agency shall submit one Installation Report for each completed project. *Provided, however,* That if any participating agency installs multiple projects with substantially similar systems characteristics, the agency may request, and the DOE may then allow the agency, to submit a single report for such systems group. The DOE may require each Installation Report to assume the format of a standard form to be supplied to participating agencies by the DOE. Each Installation Report shall state:

(i) Actual and planned project completion date;

(ii) Total funds expended;

(iii) Actual and planned breakdown of:

(A) Photovoltaic array costs;

(B) Photovoltaic structure costs;

(C) Subassemblies costs;

(D) Construction costs;

(E) Engineering design costs;

(F) Installation costs;

(G) Acceptance test costs; and

(H) Any other costs;

(iv) Names of manufacturers and/or installers;

(v) Significant problems encountered; and

(vi) Comments and recommendations.

(b) *Operational data.* Within sixty days of commencement of normal operation, each agency shall submit a Systems Operational Report containing the following operating and maintenance information for each project. The agency shall continue to submit such reports on a semiannual basis thereafter for three years, unless otherwise stipulated in the interagency agreement by which the DOE agreed to fund the project. The DOE may require each Systems Operational Report to assume the format of a standard form to be supplied to participating agencies by the DOE. Each Systems Operational

Report shall describe for the reporting period:

(1) All photovoltaic or other scheduled outages;

(i) Reasons for all scheduled outages;

(ii) Corrective actions taken; and

(2) Operations and maintenance cost.

(c) *Unscheduled outages.* All unscheduled outages shall be reported to the DOE within thirty days of the completion of corrective action, and each unscheduled outage report shall describe:

(1) Unscheduled outage length;

(2) Reasons for unscheduled outage; and

(3) Corrective action taken.

(d) In the event that any participating agency experiences logistic hardships that make semiannual reports impractical, the agency may request in writing, on or before sixty days from the due date of the report, that the DOE allow reports to be submitted on an annual basis, upon a showing of good cause by the agency. The request shall be signed by a senior policy making official of the participating agency such as an Assistant Secretary or an Assistant Administrator.

(e) If the DOE has allowed the reporting of installation data by systems group under paragraph (a)(2) of this section, operational data required under this section may also be submitted by systems group.

#### § 436.93 Assessment requirements.

(a) *Assessment by Participating Agencies.* (1) Within three years of commencement of normal operation, each agency participating in the FPUP shall provide to the DOE a Final Report on the installation and operation of each photovoltaic solar electric system. Copies of the Final Report shall be transmitted to the manufacturers and installers of the systems. This report shall be for a systems group where such group has been identified by the DOE. Each Final Report shall identify:

(i) Design characteristics of the project or system group;

(ii) Manufacturers and installers of the project;

(iii) Methods which were used to achieve cost, reliability, and designed power production goals;

(iv) Data that were or would have been helpful to the participating agency in advance of system design and implementation;

(v) Technical problems and failures;

(vi) Problems in system development and installation arising from technical, regulatory, and/or institutional interfaces; and

(vii) The extent to which the participating agency intends to rely in the future upon photovoltaic solar electric systems to supply its energy needs.

(b) *Assessment by the DOE.* (1) The DOE shall assess, in Annual Reports to the Congress, the performance and operation of the systems installed pursuant to the program. Each report shall be based on the monitoring and assessment data submitted by the participating agencies under the requirements of this Subpart, as well as other information available to the DOE. Each Annual Report will address issues relating to:

(i) Energy savings in current and future markets;

(ii) Carry-over to other applications categories and systems groups;

(iii) Potential for standardization of components;

(iv) Potential for modular use and installation of components;

(v) Optimal design approaches to achieve cost and performance goals;

(vi) Down time attributable to unscheduled outages;

(vii) Cost of repairing unscheduled outages;

(viii) Suggested resolution of regulatory issues; and

(ix) Life cycle cost data.

#### § 436.94 Additional data reporting options.

(a) The DOE will retain the option to select projects in which a participating agency will be required to:

(1) Install instrumentation and provide other services required for the collection of instrumented performance data for a period not to exceed three years from date of photovoltaic solar energy system operation, and

(2) Submit additional design disclosure, component, and facility energy load data, or such other data as may be required to evaluate photovoltaic solar electric systems for a period not to exceed three years from the date of project operation.

(b) Participating agencies selected under paragraph (a) of this section will be notified in writing by the DOE regarding their selection and of any specific instructions under that paragraph.

(c) For any project selected by the DOE under paragraph (a) of this section, the agency will be funded by the DOE to cover the costs of instrumentation and the related activities which are to be performed in accordance with the instructions provided by the DOE.

(d) The DOE may provide instrumentation, sensors, junction box,

data recording system, installation and other related data gathering services by support contractors if necessary to:

- (1) Minimize cost to the Government; or
- (2) Assure the acquisition of accurate and uniform information.

[Docket No. CAS-RM-79-402]

[FR Doc. 79-14494 Filed 5-4-79; 4:38 pm]

BILLING CODE 6450-01-M

#### [10 CFR Part 456]

### Residential Conservation Service Program; Proposed Rulemaking and Public Hearing Correction Notice

**AGENCY:** Department of Energy.

**ACTION:** Correction to Notice of Proposed Rulemaking and extension of public comment period.

**SUMMARY:** The following are changes to the proposed rule issued in FR Doc. 79-7797 in the Monday, March 19, 1979 issue of the Federal Register, Vol. 44, No. 54, Book 2, pp. 16543-16877. These changes are issued in order to correct clerical, grammatical or typographical errors in the March 19, 1979 publication and do not reflect policy changes of the Department.

**DATES:** The comment period on the proposed rule is extended to June 11, 1979.

Comments on the Draft Regulatory Analysis, the draft environmental assessment, and the urban and community impact analysis must be received by July 9, 1979.

**ADDRESS:** Send comments to: Margaret W. Sibley, Office of Conservation and Solar Applications, U.S. Department of Energy, 20 Massachusetts Avenue, NW., Washington, D.C. 20545, (202) 376-4802.

**FOR FURTHER INFORMATION CONTACT:** James R. Tanck, Director, Residential Conservation Service Program, Office of Conservation and Solar Applications, U.S. Department of Energy, 20 Massachusetts Avenue, NW., Washington, D.C. 20545, (202) 376-4708.

Margaret W. Sibley, Office of Conservation and Solar Applications, U.S. Department of Energy, 20 Massachusetts Avenue, NW., Washington, D.C. 20545, (202) 376-4802.

Issued in Washington, D.C., on May 2, 1979.

Maxine Savitz,

Deputy Assistant Secretary, Conservation and Solar Applications.

1. On page 16546, column three, the paragraph entitled "DATES" should read as follows:

"Written comments on the proposed rule must be received by June 11, 1979, 4:30 p.m., e.d.t., in order to assure their consideration. Written comments on the Draft Regulatory Analysis, the draft environmental assessment, and the urban and community impact analysis must be received by July 9, 1979, 4:30 p.m., e.d.t., in order to ensure their consideration.

Hearings will be held at the places and on the dates indicated below in the proposed rule. A special hearing will be held late in June in Washington, D.C., to hear oral comments on the Draft Regulatory Analysis, the draft environmental assessment, and the draft urban and community impact analysis. The exact date, time, and place of this hearing will be published in the Federal Register at a later time.

2. On page 16546, column three, in the paragraph entitled "HEARINGS", delete the word "seven" and insert in lieu thereof: "eight".

3. On page 16546, third column, immediately before "SUPPLEMENTARY INFORMATION," insert: "William Funk, Deputy Assistant General Counsel for Legal Counsel, U.S. Department of Energy, Room 6144, 12th & Pennsylvania Avenue, N.W., Washington, D.C. 20461, (202) 633-9296."

4. On page 16569, second column, the third full paragraph should read as follows:

"The standards being proposed apply to the following materials and products or components thereof."

5. On page 16569, third column, the sixth bullet ("Heat absorbing and heat-reflective glazing") should be deleted.

6. On page 16569, third column, under the heading "Technical Issues," after the eighth bullet, add a bullet which reads as follows:

"• HH-1-558—Federal Specification for Mineral Fiber Batts and Blankets—Industrial Type."

7. On page 16571, second column, the second full sentence should read as follows:

"The other requirements for loose-fill cellulosic insulation (thermal resistance, and resistance to odor emission, moisture absorption, and fungi) contained in this proposed rule will be unaffected by the CPSC actions."

8. On page 16571, third column, the fourth full paragraph should read as follows:

"The ASTM E 84-77 flame spread test method should be the basis for evaluating surface burning characteristics. This test method is recommended for polystyrene, polyurethane, and polyisocyanurate insulation board."

9. On page 16571, third column, after the last bullet, add two bullets which read as follows:

- Weatherstripping
- Energy Usage Display Meters"

10. On page 16572, first column, the first full paragraph, the third sentence should read as follows:

"An Underwriter's Laboratory standard is proposed for heat pumps and a proposed Underwriter's Laboratory standard is proposed for vent dampers on oil-fired appliances."

11. On page 16572, first column, the third full paragraph should read as follows:

"With respect to weatherstripping, glazing compounds, and heat absorbing and heat-reflective glazing materials, DOE has determined that no standard is necessary for the RCS program as commercially available materials are suitable."

12. On page 16573, second column, the third full sentence should read as follows:

"Exceptions to the 3-inch air space requirement with respect to flues and chimneys are made for mineral fiber loose-fill and unfaced batts and blankets and mineral cellular loosefill provided the materials are noncombustible when tested in accordance with ASTM E-136."

13. Page 16575, third column, the fourth full paragraph should read as follows:

"This Summary of the Draft Regulatory Analysis is published concurrently with the publication of the proposed rules for the RCS Program. A copy of the complete Draft Regulatory Analysis is available for public inspection in the DOE Reading Room, Room GA-152, Forrestal Building, 1000 Independence Avenue, S.W., Washington, D.C., between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday. A copy may be purchased at the cost of reproduction by contacting:

Mr. James Tanck, Director, Residential Conservation Service Program, Office of Assistant Secretary for Conservation and Solar Applications, U.S. Department of Energy, 20 Massachusetts Avenue, N.W., Washington, D.C. 20545 (202) 376-4708.

Persons who received not fully typed copies of the Draft Regulatory Analysis may receive a fully typed and edited copy without cost by contacting Mr. Tanck."

14. On page 16585, third column, the section entitled "XII. ENVIRONMENTAL AND URBAN IMPACT ANALYSIS" should read as follows:



PRELIMINARY ENERGY AUDIT REPORT

PLEASE READ INSTRUCTIONS ON REVERSE SIDE BEFORE COMPLETING THIS FORM

1.0 IDENTIFICATION DATA

1.1 What is the name and address of the Agency submitting this report?

(a) Name \_\_\_\_\_

(b) Street and Number \_\_\_\_\_

(c) City, State, and Zip Code \_\_\_\_\_

1.2 DOE Identification Number

--	--	--	--	--	--

1.3 What is the date of this report?

Month	Day	Year

1.4 Is this a new or revised report?

(a) ☐ New (b) ☐ Revised

1.5 What is the name and telephone number of the person who can be contacted regarding the information on this report?

(a) Name \_\_\_\_\_ (b) Telephone (including Area Code) \_\_\_\_\_

2.0 AGENCY SUMMARY DATA

2.1 Provide the following information for facilities/buildings under the jurisdiction of this Agency.

2.11 TOTAL Number of Agency Facilities . . . . .

2.12 Number of Facility Audits Completed . . . . .

2.13 Number of Facility Audits Outstanding . . . . .

2.14 TOTAL Number of Buildings in Facilities Audited . . . . .

2.15 TOTAL Number of Buildings in Facilities Not Audited . . . . .

2.2 Provide the following information for this Agency's individual buildings which are not in facilities.

2.21 TOTAL Number of Individual Agency Buildings . . . . .

2.22 TOTAL Number of Individual Building Audits Completed . . . . .

2.23 TOTAL Number of Individual Building Audits Outstanding . . . . .

2.3 Provide the following information for this Agency's partial buildings which are not in facilities.

2.31 TOTAL Number of Partial Agency Buildings . . . . .

2.32 TOTAL Number of Partial Building Audits Completed . . . . .

2.33 TOTAL Number of Partial Building Audits Outstanding . . . . .

Owned  
(a)

Leased  
(b)

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

_____	_____
_____	_____
_____	_____

_____	_____
_____	_____
_____	_____

3.0 ATTACHMENTS

(a) How many Schedule 1 pages are attached to this report? \_\_\_\_\_

(b) How many Schedule 2 pages are attached? \_\_\_\_\_

# PRELIMINARY ENERGY AUDIT REPORT

## General Instructions:

Public Law 95-916 (NECPA), Title V, Part 3, Section 547 directs each Federal agency to conduct preliminary energy audits of buildings which it owns or leases and report these to the Department of Energy. Audits of buildings with 30,000 or more gross square feet and any others already audited are to be reported to the DOE on or before July 1, 1979. Audits of buildings with 1,000 - 29,999 gross square feet are required to be submitted on or before June 1, 1980.

## Submit all reports to:

Federal Programs Office, MS 2221C  
Conservation and Solar Applications  
United States Department of Energy  
Washington, D.C. 20585

For clarification or assistance in completing these forms, contact the Federal Programs Office at (202) 376-4017.

Below are specific instructions. Items which are self-explanatory are not included.

## EIA-77, COVER SUMMARY SHEET INSTRUCTIONS

Item	Instruction
1.2	Enter identification number provided. If the number is not available, leave item 1.2 blank.
2.0	Enter the information requested for building/facilities which are owned or leased in the appropriate columns.
2.1	Complete item 2.1 only for agencies reporting audits of facilities. Facilities are defined as groups of closely related buildings which are master metered for one or more sources of energy. Report facility audits based on size of the largest building in the facility. For example, if one of the buildings is in excess of 30,000 gross square feet (30K GSF), provide the requested information for the facility at the same time as your report for individual buildings in excess of 30K GSF.
2.11	Enter total number of facilities which are master metered for one or more energy sources.
2.12	Enter total number of such facilities which have been audited and the results included in this report.

Item	Instruction
2.13	Enter total number of facilities which require an audit and for which an audit has not been completed and reported.
2.14	Enter total number of buildings in facilities audited as reported in 2.12. Do not include buildings for which individual energy use can be determined.
2.15	Enter total number of buildings in facilities remaining to be audited.
2.2	Complete for individual buildings where the energy usage can be determined separately.
2.21	Enter total number of buildings individually metered. Do not include those reported in facilities in 2.1 above.
2.22	Enter total number of individual buildings which were audited and the results included in this report.
2.23	Enter number of buildings which require an audit and for which an audit has not been completed and reported.
2.3	Complete if you directly own or lease partial buildings.
2.32	Enter total number of partial buildings for which audits have been completed and the results included in this report.
2.33	Enter total number of partial buildings which require an audit and for which an audit has not been completed and reported.
3.0	Identify any other attachments which you have included in this report in the margin at the bottom of the page.

## PLEASE READ INSTRUCTIONS ON REVERSE SIDE BEFORE COMPLETING THIS FORM

## 1.0 IDENTIFICATION

1.1 What is the name of the Agency?  
Name \_\_\_\_\_1.2 What is the date of this report?  

Month	Day	Year

1.3 Is this schedule for owned or leased buildings/  
facilities? (a) ☐ Owned (b) ☐ Leased

## 2.0 BUILDING/FACILITY DATA

Enter the following total for each category at right

2.1 Gross sq. footage for bldgs/facil. included in this report .....

2.2 Number of buildings/facilities included in this report .....

Gross sq. footage of all Agency buildings/facilities .....

Facilities	Indiv. Bldgs.	Partial Bldgs.
_____	_____	_____
_____	_____	_____

## 2.1 SUMMARY OF MAJOR ENERGY USING SYSTEMS

	For each energy source listed below, enter the TOTAL number of major energy using systems in the buildings/facilities in this report, their gross sq. footage, and the amounts of energy used.	How much energy was used in the preceding fiscal year?		No. of Major Energy Using Systems and Gross Sq. Footage Affected													
		Amount of Fuel (a)	Conversion Factor (b)	Heating		Cooling		Ventilation		Lighting		Hot Water	Power	Process	Other		
				No. of Systems (c)	(000's) Gross Sq. Ft. (d)	No. of Systems (e)	(000's) Gross Sq. Ft. (f)	No. of Systems (g)	(000's) Gross Sq. Ft. (h)	No. of Systems (i)	(000's) Gross Sq. Ft. (j)	No. of Systems (k)	No. of Systems (m)	No. of Systems (n)	No. of Systems (o)	No. of Systems (p)	(000's) Gross Sq. Ft. (r)
Facilities	3.1 Electricity (MWH)		11.6x10 <sup>6</sup>														
	3.2 Fuel Oil (Gal. 000's)		138.7x10 <sup>6</sup>														
	3.3 Natural Gas (MCF)		1.031x10 <sup>6</sup>														
	3.4 LPG (Gal. 000's)		95.5x10 <sup>6</sup>														
	3.5 Coal (Tons)		24.58x10 <sup>6</sup>														
	3.6 Steam (Lbs. 000's)		1.39x10 <sup>6</sup>														
	3.7 Other-Specify																
Individual Buildings	3.8 Electricity (MWH)		11.6x10 <sup>6</sup>														
	3.9 Fuel Oil (Gal. 000's)		138.7x10 <sup>6</sup>														
	3.10 Natural Gas (MCF)		1.031x10 <sup>6</sup>														
	3.11 LGP (Gal. 000's)		95.5x10 <sup>6</sup>														
	3.12 Coal (Tons)		24.58x10 <sup>6</sup>														
	3.13 Steam (Lbs. 000's)		1.39x10 <sup>6</sup>														
	3.14 Other-Specify																
Partial Buildings	3.15 Electricity (MWH)		11.6x10 <sup>6</sup>														
	3.16 Fuel Oil (Gal. 000's)		138.7x10 <sup>6</sup>														
	3.17 Natural Gas (MCF)		1.031x10 <sup>6</sup>														
	3.18 LPG (Gal. 000's)		95.5x10 <sup>6</sup>														
	3.19 Coal (Tons)		24.58x10 <sup>6</sup>														
	3.20 Steam (Lbs. 000's)		1.39x10 <sup>6</sup>														
	3.21 Other-Specify																

PRELIMINARY ENERGY AUDIT REPORT

General Instructions:

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United States Department of Energy  
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Below are specific instructions. Items which are self-explanatory are not included.

EIA-77, INSTRUCTIONS FOR SCHEDULE 1

Item	Instruction
1.3	Submit separate schedules for owned and leased facilities/buildings
3.0	<p>A "major energy using system" is a system which uses a significant amount of the total energy of the building. Seven energy using systems are listed across the page. An additional column is provided for you to enter information about one "other" major energy using system if appropriate.</p> <p>Enter multiple window air conditioners, heaters, etc. in a building as one cooling, heating, etc. system.</p> <p>Where data is available, enter the total number of gross square feet (GSF) supported by differently fueled major energy using systems.</p> <p>(a) Enter amount of fuel used for the preceding fiscal year in the units of measure indicated.</p> <p>(b) Convert quantities in (a) into billions of Btu's using the conversion factors provided on the form.</p>

Item Instruction

- (c), Enter the number of major energy using
- (d), heating, cooling, ventilating, etc. systems
- (e), etc. by energy source.
- (d), Enter the total gross square feet (GSF)
- (f), heated, cooled, ventilated, etc. by the
- (h), etc. number of systems listed.
- (m) Enter the number of power systems which are a major energy using system. One power system may include building equipment such as elevators, escalators, compactors and portable equipment such as xerox machines, small computers and portable x-ray machine.
- (o) Enter the number of processes which are major energy users. A "process system" may include fixed non-building support equipment such as industrial or manufacturing machinery, communications equipment, x-ray machines and large computers.
- (q) Examples of "other systems" include refrigeration and humidification
- 3.7, Enter any other sources of energy not listed and specify
- 3.14, them. Examples are solar, geothermal, wind, wood, and
- 3.21 methane.

PLEASE READ INSTRUCTIONS ON REVERSE SIDE BEFORE COMPLETING THIS FORM

1.0 IDENTIFICATION								
1.1 What is the name of the Agency? Name _____		1.1 What is the date of this report? Month _____ Day _____ Year _____		1.3 Is this schedule for owned or leased buildings/ facilities? (a) <input type="checkbox"/> Owned (b) <input type="checkbox"/> Leased				
2.0 SUMMARY STATUS DATA								
For each building use and size Category below, enter—→		Total Inventory Buildings		Individual Buildings Audited			No. of Buildings In Facilities Audited	
Use	(a) Size	(b) Number	(c) Thous. GSF	(d) Number	(e) Thous. GSF	(f) Mil.BTU/Yr.	(g) Number	(h) Thous. GSF
2.1 Office	2.1.1 30 K and Over							
	2.1.2 1 to 30K							
	2.1.3 Under 1K							
2.2 Hospital	2.2.1 30K and Over							
	2.2.2 1 to 30K							
	2.2.3 Under 1K							
2.3 Prison	2.3.1 30K and Over							
	2.3.2 1 to 30K							
	2.3.3 Under 1K							
2.4 School	2.4.1 30K and Over							
	2.4.2 1 to 30K							
	2.4.3 Under 1K							
2.5 Other Institutional	2.5.1 30K and Over							
	2.5.2 1 to 30K							
	2.5.3 Under 1K							
2.6 Housing	2.6.1 30K and Over							
	2.6.2 1 to 30K							
	2.6.3 Under 1K							
2.7 Storage	2.7.1 30K and Over							
	2.7.2 1 to 30K							
	2.7.3 Under 1K							
2.8 Industrial	2.8.1 30K and Over							
	2.8.2 1 to 30K							
	2.8.3 Under 1K							
2.9 Service	2.9.1 30K and Over							
	2.9.2 1 to 30K							
	2.9.3 Under 1K							
2.10 Research & Development	2.10.1 30K and Over							
	2.10.2 1 to 30K							
	2.10.3 Under 1K							
2.11 Utility	2.11.1 30K and Over							
	2.11.2 1 to 30K							
	2.11.3 Under 1K							
2.12 Other	2.12.1 30K and Over							
	2.12.2 1 to 30K							
	2.12.3 Under 1K							
2.13 Total	2.13.1 30K and Over							
	2.13.2 1 to 30K							
	2.13.3 Under 1K							
2.14 TOTALS								
2.15 For each climatic zone at the right, enter the information requested in each column. (See map on reverse)	1							
	2							
	3							
	4							
	5							
	6							
	7							
2.16 TOTAL of Zones								



#### PRELIMINARY ENERGY AUDIT REPORT

##### General Instructions:

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##### Submit all reports to:

Federal Programs Office, MS 2221C  
Conservation and Solar Applications  
United States Department of Energy  
Washington, D.C. 20585

For clarification or assistance in completing these forms, contact the Federal Programs Office (202) 376-4017.

Below are specific instructions. Items which are self-explanatory are not included.

##### EIA-77, INSTRUCTIONS FOR SCHEDULE 2

Item	Instruction
1.3	Submit separate schedules for owned and leased buildings/facilities summaries.
2.0	(b) Enter the total number of buildings in the agency inventory as of the last day of preceding fiscal year. (c) Enter total area of the buildings in thousands of gross square feet (Thous. GSF). (f) Enter the total energy use in millions of Btu's for the preceding fiscal year for individual buildings audited. (g) Enter the number of buildings included within the facilities that have been audited. (h) Enter total area for those buildings included in facilities that have been audited.
2.14	Enter the totals of all columns.
2.15	Enter information for each column for each climatic zone plus the total.

##### Zone Descriptions in Heating (HDD) and Cooling (CDD) Degree Days are:

- Zone 1 - Less than 2000 CDD and more than 7000 HDD
- 2 - Less than 2000 CDD and 5500 to 7000 HDD
- 3 - Less than 2000 CDD and 4000 to 5499 HDD
- 4 - Less than 2000 CDD and 2000 to 3999 HDD
- 5 - Less than 2000 CDD and 0 to 1999 HDD
- 6 - More than 2000 CDD and 0 to 1999 HDD
- 7 - More than 2000 CDD and 2000 to 4000 HDD

